

In re the application of:
Stefan Tobolka
For: LAYERED WEB SEALING AND SEVERING HEAD
AND METHOD FOR USE THEREOF

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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A layered web sealing and severing head, comprising:
 - a knife having a first thermal conductivity;
 - a supporting base having a second, lower, thermal conductivity;
 - said supporting base extending, in a lengthwise direction of said knife, along opposite faces of said knife so as to partially envelop said knife such that said knife is immobily supported by said supporting base and protrudes from said supporting base.
2. (currently amended) The head of claim 1 wherein said knife is an electrical conductor and said supporting base is ~~a dielectric~~ not an electrical conductor.
3. (original) The head of claim 2 further comprising a terminal at either end of said knife.
4. (original) The head of claim 3 further comprising at least one electromotive force for coupling to each said terminal for establishing a baseline current through said knife and a momentary spike current through said knife.
5. (currently amended) The head of ~~any one of claim 2 to~~ claim [[4]] 2 further comprising at least one electromotive force for coupling to either end of said knife for establishing a baseline current through said knife and a momentary spike current through said knife.

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6. (currently amended) The head of ~~any one of claim 1 to~~ claim [[5]] 1 further comprising means for maintaining said knife at a baseline temperature and for periodically, momentarily, heating said knife to a higher spike temperature such that said supporting base remains substantially at said baseline temperature.
7. (cancelled)
8. (currently amended) The head of ~~any one of claim 1 to~~ claim [[7]] 1 wherein said knife is partially embedded in said supporting base.
9. (currently amended) The head of ~~any one of claim 1 to~~ claim [[8]] 1 wherein said supporting base comprises two base halves that sandwich said knife therebetween.
10. (currently amended) The head of ~~any one of claim 1 to~~ claim [[9]] 2 wherein said supporting base is fabricated of anodised aluminum and said knife if fabricated of metal.
11. (currently amended) The head of ~~any one of claim 1 to~~ claim [[9]] 2 wherein said supporting base is fabricated of ceramic.
12. (currently amended) The head of ~~any one of claim 1 to~~ claim [[11]] 1 wherein said supporting base tapers to a point where said knife protrudes from said supporting base.
13. (currently amended) The head of ~~any one of claim 1 to~~ claim [[12]] 1 wherein said knife is a strip.

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14. (original) A sealing jaw assembly, comprising:

a first jaw with a backstop;

an opposed second jaw with a sealing head, said sealing head having:

a strip having a first thermal conductivity;

a supporting base extending along opposite faces of said strip so as to partially envelop said strip such that said strip is immobily supported by said supporting base and protrudes from said supporting base toward said backstop;

said supporting base having a second, lower, thermal conductivity.

15. (currently amended) The sealing jaw assembly of claim 14 wherein said strip is an electrical conductor and said supporting base is ~~a dielectric~~ not an electrical conductor.

16. (original) The sealing jaw assembly of claim 15 further comprising at least one electromotive force for coupling to either end of said strip for establishing a baseline current through said strip and, when said strip abuts said backstop through a material to be sealed, a momentary spike current through said strip.

17. (currently amended) The sealing jaw assembly of ~~any one of claim 14 to~~ claim [[16]] 14 further comprising means for reciprocating said first jaw and said second jaw toward and away from each other.

18. (currently amended) The sealing jaw assembly of ~~any one of claim 14 to~~ claim [[17]] 14 wherein said supporting base tapers to a point where said strip protrudes from said supporting base.

19. (currently amended) A method of sealing and cutting a layered web, comprising:

heating a sealing head comprising a knife having a first thermal conductivity protruding from a supporting base having a second, lower, thermal conductivity, to a baseline temperature,

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said baseline temperature sufficient to seal layers of said web together;
pressing said sealing head against said web for a dwell time in order to form a seal; and
thereafter, spiking a temperature of said knife above said baseline temperature so as to
sever said web by melting.

20. (cancelled)

21. (new) The method of claim 19 wherein said heating said sealing head to a baseline
temperature comprises establishing a first electric current through said knife and wherein said
spiking said temperature of said knife comprises temporarily establishing a second electric
current through said knife, said second electric current being greater than said first electric
current.

22. (new) The method of claim 19 wherein said layered web is a laminate of at least two
different materials and said baseline temperature is selected so as to be sufficient to seal said
layered web but insufficient to cut through said layered web.